

Workshop on use of global teleconnection patterns for weather/climate forecasting: Weeks 1-3

Where: ESRL/PSD Boulder, Colorado

When: Tuesday, February 24, 2009

The workshop is geared toward weather-climate forecasters who prepare week 1-3 predictions on a daily basis. The purpose is to introduce a multi-pronged forecast process that combines statistical and numerical model predictions with synoptic interpretation and dynamical diagnosis. The workshop will concentrate on the latter aspect using a global monitoring approach proposed by Weickmann and Berry (WB; 2007, 2009). Bridging weather and climate remains elusive; however, the approach involves a preliminary effort to link synoptic weather systems, global subseasonal variations and the slow ENSO cycle. A regional emphasis is on the Asia-Pacific-North American sector.

Subseasonal variability occupies a unique niche in weather-climate studies, and is a focus of the workshop. There are at least two slow subseasonal phenomena that engage global teleconnection patterns. One is the well known Madden-Julian Oscillation (MJO), a 30-60 day signal in *tropical* convection that propagates from the Indian Ocean out into the Pacific and western hemisphere. Less known is the global wind oscillation (GWO; WB, 2009), which is derived from a *global* average of the zonal wind or relative atmospheric angular momentum. Its primary forcing is from mountain and frictional torques but momentum transports involving mid-latitude eddy processes play an important indirect role. Together the MJO and GWO provide a big picture assessment of both tropical and extratropical variability, which can then be used in the week 1-3 forecast process.

The following is an outline of the day-long session.

1. Introduction
2. MJO and GWO fundamentals, and monitoring
3. MJO and GWO composites as part of the forecast process
4. Using the MJO and the GWO: A real time example
5. Towards Statistical and Numerical Prediction
6. Summary and take home points

The workshop will be held at the David Skaggs Research Center (DSRC) in Room GC402. DSRC is located at 325 Broadway on the Federal Campus in Boulder, Colorado. Security requires visitors obtain a badge with a government issued identity card (e.g., drivers license) for US citizens and a green card or visa for foreign nationals. We will provide more information about security procedures when the number of attendees becomes known. Boulder is located about 45 miles from Denver International Airport (DIA), and there are shuttle services that can bring you here. If you rent a car, it takes about 50 minutes to drive the distance in non-rush hour traffic. There is a toll route that is faster and costs ~\$10. Bus service is also available from DIA to downtown Boulder for \$12. There are number of hotels to choose from in the area including the Millennium Harvest House, Hotel Boulderado, Best Western Golden Buff, Homewood Suites Boulder CO, etc.

For additional information see:

<http://www.esrl.noaa.gov/about/visiting.html>

If you have questions or plan to attend the workshop, please contact either klaus.weickmann@noaa.gov or edward.berry@noaa.gov.